

Federal Communications Commission

§ 22.873

system. Protection from interference requires that the signals of the new systems must not exceed a ground station received power of -130 dBm within a 6 kHz receive bandwidth, calculated assuming a 0 dBi vertically polarized receive antenna.

[70 FR 19310, Apr. 13, 2005]

§ 22.861 Emission limitations.

The rules in this section govern the spectral characteristics of emissions for commercial aviation systems in the Air-Ground Radiotelephone Service. Commercial aviation air-ground systems may use any type of emission or technology that complies with the technical rules in this subpart.

(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

(b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.*, 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) *Alternative out of band emission limit.* The licensee(s) of commercial aviation air-ground systems, together with affected licensees of Cellular Radiotelephone Service systems operating in the spectrum immediately below and adjacent to the commercial aviation air-ground bands, may establish an alternative out of band emission limit to be used at the 849 MHz and 894 MHz band edge(s) in specified

geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) *Interference caused by out of band emissions.* If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

[70 FR 19310, Apr. 13, 2005]

§ 22.863 Frequency stability.

The frequency stability of equipment used under this subpart shall be sufficient to ensure that, after accounting for Doppler frequency shifts, the occupied bandwidth of the fundamental emissions remains within the authorized frequency bands of operation.

[70 FR 19310, Apr. 13, 2005]

§ 22.867 Effective radiated power limits.

The effective radiated power (ERP) of ground and airborne stations operating on the frequency ranges listed in § 22.857 must not exceed the limits in this section.

(a) The peak ERP of airborne mobile station transmitters must not exceed 12 Watts.

(b) The peak ERP of ground station transmitters must not exceed 500 Watts.

[70 FR 19310, Apr. 13, 2005]

§ 22.873 Construction requirements for commercial aviation air-ground systems.

Licensees authorized to use more than one megahertz (1 MHz) of the 800 MHz commercial aviation air-ground spectrum allocation (see § 22.857) must make a showing of "substantial service" as set forth in this section. Failure by any such licensee to meet this requirement will result in forfeiture of the license and the licensee will be ineligible to regain it. Licensees authorized to use one megahertz or less of the 800 MHz commercial aviation air-